Lake McBride Lake Vegetation Index Results (7-28-2016)

The Lake Vegetation Index (LVI) is a multi-metric index that evaluates how closely a lake's plant community resembles one that would be expected in a condition of minimal human disturbance. It is based on a rapid field assessment of aquatic and wetland plants as indicators of various effects of human disturbance over time. Plants respond to physical disturbances such as introduction of exotic species or lakeshore alterations, and chemical disturbance such as introduction of excess nutrients, particulates, or herbicides from the surrounding land uses.

The LVI method is performed from a boat, and involves dividing a lake into 12 units and identifying plants in 4 of the 12 units (Figure 1). Plants are identified in the selected unit by a visual boat "drive by" and also via a transect approach. The resulting data is used to calculate the LVI and is evaluated according to the scoring system in Table 1.

TABLE 1. Category names, ranges of values for LVI, and example descriptions of biological conditions typically found for that category.

Aquatic life use category	***LVI Range***	***Description***
Exceptional	78–100	Nearly every plant present is a species native to Florida, invasive taxa typically not found. About 30% of taxa present are identified as sensitive to disturbance.
Healthy	43–77	About 85% of plant taxa are native to Florida; invasive taxa present. Sensitive taxa have declined to about 15%.
Impaired	0–42	About 70% of plant taxa are native to Florida. Invasive taxa may represent up to 1/3 of total taxa. Less that 10% of the taxa are sensitive.

The Lake Vegetation Index score for Lake McBride was 67, placing the lake's vegetative community in the healthy category.

Sixty one plant species were found during the survey. The native species, fanwort, (*Cabomba caroliniana*), water shield (*Brasenia schreberi*) and fragrant waterlily (*Nymphaea odorata*) were the most dominant plants in the lake. Other examples of native shoreline vegetation included red maple (*Acer rubrum*), buttonbush (*Cephalanthus occidentalis*) and pickerelweed (*Pontederia cordata*).

Unfortunately, wild taro (*Colocasia esculenta*), hydrilla (*Hydrilla verticillata*) and Chinese tallow (*Sapium sebiferum*), listed as Category I Invasive Exotics by the Florida Exotic Pest Control Council http://www.fleppc.org/ are invasive exotics that are a concern in Lake McBride. Alligator weed (*Alternanthera philoxeroides*), a Category II Invasive Exotic, was found for the first time in Lake McBride in 2013 and is still present. Wild taro (*Colocasia esculenta*) Chinese tallow tree (*Sapium sebiferum*) are two extremely invasive plants found around the lake. Another non-native plant, burhead sedge (*Oxycaryum cubense*, formerly known as *Scirpus*

cubensis) is especially prevalent on the tussocks found in and along the edges of the lake.

For a complete list of plants found during the LVI survey, please see Table 2.

TABLE 2. Scientific and common names of the plants identified during the Lake McBride LVI survey (7-28-16).

Scientific Name	Common Name
Acer rubrum	red maple
Alternanthera philoxeroides(II)	alligator weed
Andropogon sp.	broomsedge
Bacopa caroliniana	lemon bacopa
Bidens laevis	smooth beggartick
Bidens mitis	smallfruit beggartick
Boehmeria cylindrica	false nettle
Brasenia schreberi	watershield
Cabomba caroliniana	fanwort
Carex frankii	Frank's sedge
Cephalanthus occidentalis	buttonbush
Colocasia esculenta (I)	wild taro
Cyrilla racemiflora	swamp titi
Decodon verticillatus	swamp loosestrife
Dichanthelium sp.	witch grass
Diospyros virginiana	common persimmon
Echinochloa crusgalli	barnyard grass
Echinochloa walteri	coast cockspur grass
Eleocharis baldwinii	road-grass
Eupatorium capillifolium	dogfennel
Habenaria repens	water spider orchid
Hydrocotyle sp.	water pennywort
Juncus effusus	common rush
Juncus marginatus	grassleaf rush
Leersia hexandra	southern cutgrass
Limnobium spongia	frog's bit
Liquidamber styraciflua	American sweetgum
Ludwigia arcuata	needleleaf ludwigia
Ludwigia decurrens	wingleaf primrose willow
Ludwigia leptocarpa	anglestem primrose willow
Luziola fluitans	southern watergrass
Magnolia virginiana	sweetbay magnolia
Mikania scandens	climbing hempvine
Myrica cerifera	wax myrtle
Myriophyllum heterophyllum	twoleaf watermilfoil

Scientific Name	Common Name
Nuphar sp.	spatterdock
Nymphaea odorata	fragrant waterlily
Nyssa sylvatica var. biflora	swamp tupelo
Oxycaryum cubense	burhead sedge
Panicum hemitomon	maidencane
Pinus taeda	loblolly pine
Polygonum densiflorum (glabrum)	denseflower knotweed
Polygonum punctatum	dotted smartweed
Pontederia cordata	pickerelweed
Quercus nigra	water oak
Quercus virginiana	southern live oak
Rhexia mariana	maryland meadowbeauty
Rhynchospora chalarocephala	loosehead beaksedge
Rhynchospora glomerata	clustered beaksedge
Saccharum giganteum	sugarcane plumegrass
Sagittaria latifolia	broadleaf arrowhead
Salix carolina	coastal plain willow
Sapium sebiferum (I)	Chinese tallow tree
Scirpus cyperinus	woolgrass
Sesbania herbacea	bigpod sesbania
Sphagnum sp.	sphagnum moss
Taxodium ascendens	pond cypress
Triadenum virginicum	marsh st. johnswort
Typha sp.	cattail
Vitis rotundifolia	muscadine
Xyris sp.	yelloweyed grass

Names in bold are exotic
I-Category I Invasive Exotics
II-Category II Invasive Exotics

For additional information about the LVI please go to the Florida Department of Environmental Protection webpage; http://www.dep.state.fl.us/water/sas/training/docs/lvi_primer.pdf. For additional information about exotic Category I and II invasive exotic plants, please go to the Florida Exotic Pest Plant Council http://www.fleppc.org/list/list.htm.

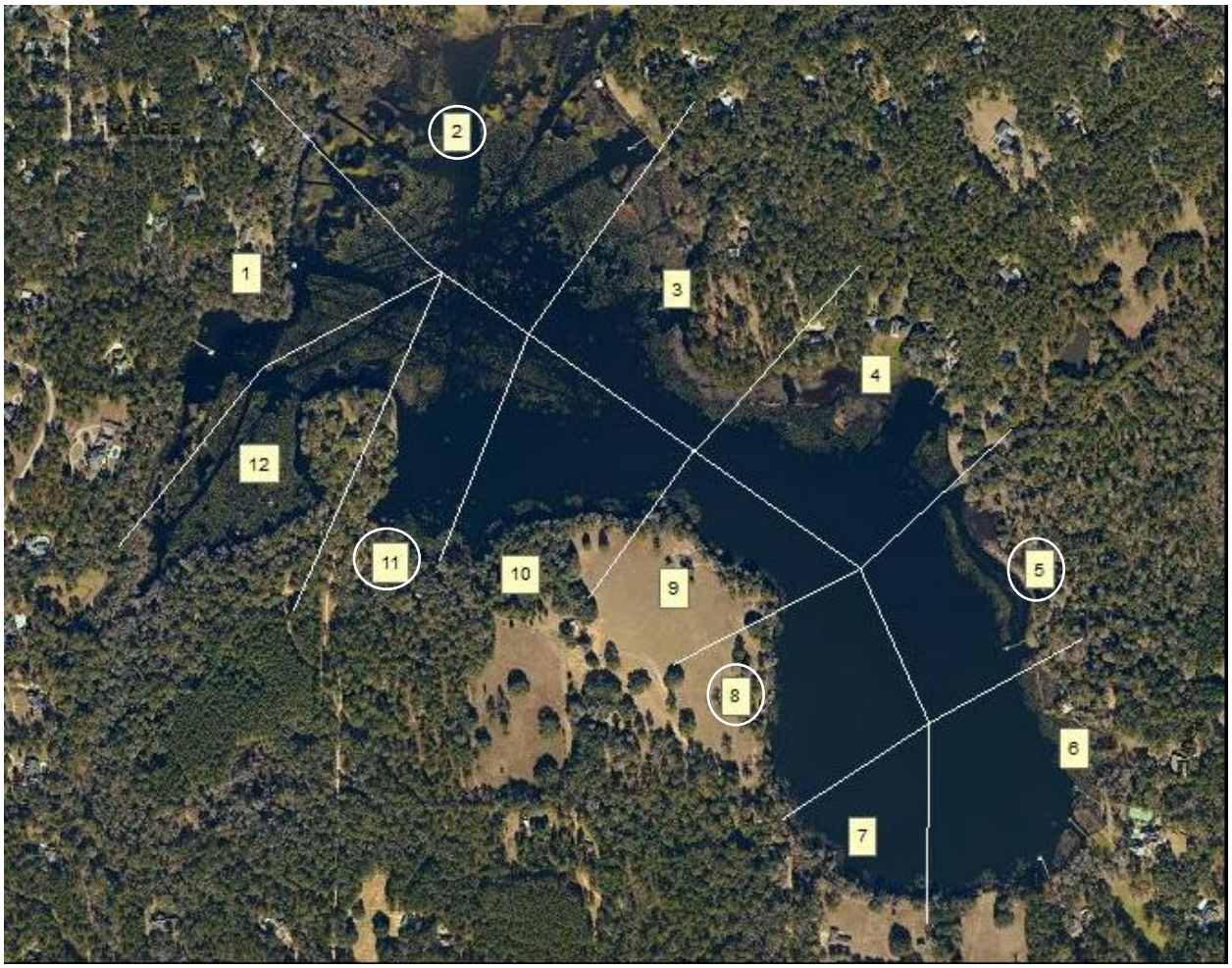

FIGURE 1. Lake McBride showing unit divisions. Circled numbers denote surveyed units.